PTO/SB/05 (01-04) Approved for use through 07/31/2006. OMB 0651-0032

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UTILITY PATENT APPLICATION **TRANSMITTAL**

Title

HES 2003-IP-012204U1 Attorney Docket No. Roger L. Schultz First Inventor Apparatus and Method for ER 630637968 US Express Mail Label No.

(Only for new nonprovisional applications under 37 CFR 1.53(b))	Express Mail Label No. ER 630637968 US				
APPLICATION ELEMENTS See MPEP chapter 600 concerning utility patent application contents.	ADDRESS TO: Mail Stop Patent Application Commissioner for Patents P.O. Box 1450 Alexandria VA 22313-1450				
1. Fee Transmittal Form (e.g., PTO/SB/17) (Submit an original and a duplicate for fee processing) Applicant claims small entity status. See 37 CFR 1.27. 3. Specification [Total Pages40] (preferred arrangement set forth below) - Descriptive title of the invention - Cross Reference to Related Applications - Statement Regarding Fed sponsored R & D - Reference to sequence listing, a table, or a computer program listing appendix - Background of the Invention - Brief Summary of the Invention - Brief Description of the Drawings (if filed) - Detailed Description - Claim(s) - Abstract of the Disclosure 4. Drawing(s) (35 U.S.C. 113) [Total Sheets] a.	7. CD-ROM or CD-R in duplicate, large table or Computer Program (Appendix) 8. Nucleotide and/or Amino Acid Sequence Submission (if applicable, all necessary) a. Computer Readable Form (CRF) b. Specification Sequence Listing on: i. CD-ROM or CD-R (2 copies); or ii. Paper c. Statements verifying identity of above copies ACCOMPANYING APPLICATION PARTS 9. Assignment Papers (cover sheet & document(s)) 10. 37 CFR 3.73(b) Statement Power of (when there is an assignee) 11. English Translation Document (if applicable) 12. Information Disclosure Copies of IDS Statement (IDS)/PTO-1449 Citations 13. Preliminary Amendment 14. Return Receipt Postcard (MPEP 503) (Should be specifically itemized) 15. Certified Copy of Priority Document(s) (if foreign priority is claimed) 16. Nonpublication Request under 35 U.S.C. 122 (b)(2)(B)(i). Applicant must attach form PTO/SB/35 or its equivalent. 17. Other: Exprass Mail Certificate				
specification following the title, or in an Application Data Sheet under 3					
	tion-in-part (CIP) of prior application No.:				
Prior application information: Examiner Art Unit: For CONTINUATION OR DIVISIONAL APPS only; The entire disclosure of the prior application, from which an oath or declaration is supplied under Box 5b, is considered a part of the disclosure of the accompanying continuation or divisional application and is hereby incorporated by reference. The incorporation can only be relied upon when a portion has been inadvertently omitted from the submitted application parts. 19. CORRESPONDENCE ADDRESS					
Customer Number: 29920	OR LJ Correspondence address below				
Name					
Address					
City	State Zip Code				
	elephone Fax				
Name (Print/Type) John W. Wustenberg	Registration No. (Attorney/Agent) 35,415				
Signature Man la la la la bom nun	Date 14 MAD 04				

USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop Patent Application, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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PTO/SB/17 (10-03)
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FEE TRANSMITTAL for FY 2004

Effective 10/01/2003. Patent fees are subject to annual revision.

Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT

(\$)	3278	3
141	221	,

Complete if Known		
Application Number		
Filing Date		
First Named Inventor	Roger L. SSchültz	
Examiner Name		
Art Unit		
Attorney Docket No.	HES 2003-TP-012204III	

METHOD OF PAYMENT (check all that apply)	FEE CALCULATION (continued)				
Check Credit card Money Other No	one 3. ADDITIONAL FEES				
Deposit Account:	Large Entity Small Entity				
Deposit Account 08-0300	Fee Fee Fee Fee Fee Description Code (\$) Fee Pai	d_			
Number	1051 130 2051 65 Surcharge - late filing fee or oath	_			
Deposit Account Halliburton	1052 50 2052 25 Surcharge - late provisional filing fee or cover sheet	4			
Name The Director is authorized to: (check all that apply)	1053 130 1053 130 Non-English specification	4			
X Charge fee(s) indicated below X Credit any overpaymer	nts 1812 2,520 1812 2,520 For filing a request for ex parte reexamination	4			
Charge any additional fee(s) or any underpayment of fee(s)	1804 920* 1804 920* Requesting publication of SIR prior to Examiner action				
Charge fee(s) indicated below, except for the filing fee to the above-identified deposit account.	1805 1,840* 1805 1,840* Requesting publication of SIR after Examiner action				
FEE CALCULATION	1251 110 2251 55 Extension for reply within first month	_			
1. BASIC FILING FEE	1252 420 2252 210 Extension for reply within second month	_			
Large Entity Small Entity	1253 950 2253 475 Extension for reply within third month	╝			
Fee Fee Fee Fee Fee Pescription Fee Pa	id 1254 1,480 2254 740 Extension for reply within fourth month				
1001 770 2001 385 Utility filing fee	1255 2,010 2255 1,005 Extension for reply within fifth month	\Box			
1002 340 2002 170 Design filing fee 770	1401 330 2401 165 Notice of Appeal	Ц.			
1003 530 2003 265 Plant filing fee	1402 330 2402 165 Filing a brief in support of an appeal	4			
1004 770 2004 385 Reissue filing fee	1403 290 2403 145 Request for oral hearing	_			
1005 160 2005 80 Provisional filing fee	1451 1,510 1451 1,510 Petition to institute a public use proceeding				
SUBTOTAL (1) (\$) 770	1452 110 2452 55 Petition to revive - unavoidable	_			
2. EXTRA CLAIM FEES FOR UTILITY AND REISS	1453 1,330 2453 665 Petition to revive - unintentional	4			
Fee from	1501 1,330 2501 665 Utility issue fee (or reissue)	4			
Extra Claims below Fee P Total Claims 102 -20** = 82 x 18 = 147		_			
Independent 15 arr 12 v 96 102	1303 840 2303 320 Plant issue lee	_			
Claims L13 - 3 = L12	1460 130 1460 130 Petitions to the Commissioner	4			
	1807 50 1807 50 Processing fee under 37 CFR 1.17(q)	4			
Large Entity Small Entity Fee Fee Fee Fee Fee Description	1806 180 1806 180 Submission of Information Disclosure Stmt	4			
Code (\$) Code (\$)	8021 40 8021 40 Recording each patent assignment per property (times number of properties)				
1202 18 2202 9 Claims in excess of 20 1201 86 2201 43 Independent claims in excess of 3	1809 770 2809 385 Filing a submission after final rejection	7			
1203 290 2203 145 Multiple dependent claim, if not pa	(67 6111 1125(4))	ᅦ			
1204 86 2204 43 ** Reissue independent claims over original patent	examined (37 CFR 1,129(b))	\dashv			
1205 18 2205 9 ** Reissue claims in excess of 20	1802 900 1802 900 Request for expedited examination	+			
and over original patent	of a design application	-			
SUBTOTAL (2) (\$) 2508 Other fee (specify) *Reduced by Basic Filing Fee Paid SUBTOTAL (3) (\$) 0					
**or number previously paid, if greater; For Reissues, see above SUBTOTAL (3) (\$) 0					
SUBMITTED BY	(Complete (if applicable))	_			

SUBMITTED BY (Complete (if a)				e (if applicable))	
Name (Print/Type)	John W. Wustenberg	Registration No. (Attorney/Agent) 35,415		Telephone 580.251.3782	
Signature	perhaption (1. Cal and)			Date	24 MAR 04

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Roger L. Schultz et al.

Application No.: 0 / unknown

Group No.: unknown

Filed: concurrently herewith Examiner: unknown

For Apparatus and Method For Creating Pulsating Fluid Flow, and Method of Manufacture For The Apparatus

Assistant Commissioner for Patents Washington, D.C. 20231

EXPRESS MAIL CERTIFICATE

"Express Mail" label number <u>ER 630637968 US</u>
Date of Deposit <u>Mauch</u> 25, 2004

I hereby state that the following attached paper or fee Specification with 40 pages
6 sheets of drawings unsigned Declarattion
Patent Application Transmittal
Fee Transmittal
Information Disclosure Statement, PTO-1449 & references
Return Postcard

is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 C.F.R. § 1.10, on the date indicated above and is addressed to the Assistant Commissioner for Patents, Washington, D.C. 20231.

Sheila Gibbs

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(Express Mail Certificate [8-3])